

**Notice of Allowability**

Application No.

09/975,161

Examiner

Vincent P. Barth

Applicant(s)

SMITH ET AL.

Art Unit

2877

aw

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE dated 3 May 2004.
2. ☒ The allowed claim(s) is/are 1,3-11 and 13-21.
3. ☒ The drawings filed on 9 Jan. 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 0504
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Preliminary Comments*

1. The instant Office Action is in response to Applicants' third request for a continued examination (RCE) under 37 CFR 1.114 filed on 3 May 2004. A copy of Applicants' Information Disclosure Statement dated 3 May 2004 has been signed and initialed by the Examiner, and is included herewith. Accordingly, the following represents a statement of reasons for allowability.

### *Allowable Subject Matter*

2. Claims 1, 3-11 and 13-21 are allowable, since the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations set forth therein.
3. Referring to Claim 1, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby the determination of the mineral scale deposition rate in a formation fluid is accomplished by placing an optical probe in contact with the fluid and measuring the changes in the refractive index, and in which the probe is an ATR (attenuated total reflectance) probe, in combination with the remaining limitations in the claim. Claims 3-10 are allowable based on their dependency upon the claim from which each is dependent. Referring to Claim 11, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby controlling the mineral scale deposition rate in a formation fluid is accomplished by placing an optical probe in contact with the fluid and measuring the changes in the refractive index, in which the probe is an ATR

(attenuated total reflectance) probe, and determining the on-set and rate, if any, of mineral scale deposition from the formation fluid as a function of the changes in the refractive index at the probe surface, in combination with the remaining limitations in the claim. Claims 13-20 are allowable based on their dependency upon the claim from which each is dependent. Referring to Claim 21, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby a system for controlling mineral scale deposition rate in a formation fluid comprises an ATR probe which can measure changes in the refractive index at the probe surface and a processor for determining from the data the rate of deposition of the mineral scale, in combination with the remaining limitations in the claim.

#### *Comments*

4. The following prior art reference is of interest, and was published following the search conducted by the Examiner on 16 January 2004, in connection with the previous Notice of Allowance: Mougin, U.S. Pat. No. 6,690,453 (10 Feb. 2004) discloses a system for predicting the flocculation threshold of asphaltenes by means of determining the refractive index of several reference asphaltenes, but does not disclose or suggest the limitations as presented in the instant claims, nor would it be obvious to modify the Mougin reference to arrive at the instant invention as claimed.

**CONCLUSION**

5. Applicants' Claims 1, 3-11 and 13-21 are allowable based on the reasons set forth above.
6. Applicants' Claims 2 and 12 had been cancelled during earlier stages of the prosecution.
7. Any inquiries concerning this communication from the examiner should be directed to Vincent P. Barth, whose telephone number is (571) 272-2410, and who may be ordinarily reached from 9:00 a.m. to 5:30 p.m., Monday through Friday. The official fax number for communications to the group is 703-872-9306.
8. If attempts to reach the examiner prove unsuccessful, the examiner's supervisor is Frank G. Font, who may be reached at 571-272-2415.
9. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

  
Richard A. Rosenberger  
Primary Examiner